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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/723,481
Filing Date: November 28, 2000
Appellant(s): MCDYSAN ET AL.

Phouphanoomketh Ditthavong
Reg. No. 44658
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed November 21, 2008 appealing from the Office action mailed September 13, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

The applications listed by the applicants, 09/723,480 and 09/723,501 either have appeal briefs filed with the office or have already had examiner's answers submitted and relate to similar issues at this application.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6606316	Albert et. al.	8-2003
6505244	Natarajan et al.	1-2003
6674743	Amara et al.	1-2004
6167445	Gai et al.	12-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-2, 4, 7, 16, 22-27, 29, 32, 40, and 46-49 are rejected under 35 U.S.C. 102(e) as being anticipated by Albert (6606316).

Regarding claim 1 and 26, Albert teaches a access device for use in a programmable access device, said access device comprising:

first and second network interfaces through which packets are communicated with a network (Column 9, lines 36 – 48);

a packet header filter and a forwarding table, wherein the forwarding table is utilized to forward packets between the first and second network interfaces (Column 16, lines 53 – 63), and wherein said packet header filter identifies messages received at to one of the first and second network interfaces on which policy-based services are to be implemented (Column 12, line 63 – Column 13, line 9) and passes identified messages via a message interface to an external processor included in said network access system for implementation of the policy-based services by the external processor (Column 7, line 55 – Column 8, line 12; Column 6, line 48), wherein said packet header

filter passes all other received messages through the packet header filter to another processor (Figure 3C; Column 12, lines 45 – 56); and

a control interface through which said packet header filter and said forwarding table are programmed (Column 18, lines 23 – 41).

Regarding claim 2 and 27, Albert teaches the programmable access device of claims 1 and 26, wherein the packet header filter receives packets directly from the first network interface (Column 12, lines 45 – 56).

Regarding claims 4 and 29, Albert teaches the programmable access device of claims 1 and 26, wherein the packet header filter filters packets for service processing based upon protocol information pertaining to protocol layers higher than layer 3 (Column 17, lines 49 – 55).

Regarding claims 7, 16, 32, and 40, Albert teaches the programmable access device of claims 1 and 26, and further comprising at a least a usage monitor that monitors at least one traffic type (Column 12, lines 56 – 62).

Regarding claim 22 and 46, Albert teaches the programmable access device of claims 1 and 26, and further comprising a plurality of protocol-specific state machines for a respective plurality of protocol types (Column 11, lines 1 – 14).

Regarding claims 23 and 47, Albert teaches the programmable access device of claims 22 and 46, wherein said plurality of protocol-specific state machines include a transport control protocol (TCP) state machine that, responsive to a control command, provides preferential treatment to a particular TCP session (Column 11, lines 1 – 14).

Regarding claims 24 and 48, Albert teaches the programmable access device of claims 1 and 26, and further comprising a reporting interface through which the programmable access device reports state information for active sessions to an external processor (Column 12, lines 56 – 62).

Regarding claims 25 and 49, Albert teaches the programmable access device of claims 24 and 48, wherein the reporting interface reports the state information for an active session in response to allocation of service to a new external service controller (Column 7, line 55 – Column 8, line 12).

Claims 19-21 and 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert.

Regarding claims 19-21 and 43-45, Albert teaches the programmable access device of claims 1 and 26.

Albert does not explicitly indicate that the identified message is SIP, IGMP, or RSVP.

Examiner takes Official Notice (see MPEP § 2144.03) that "the message protocol between the message identifier and external processors could be SIP, IGMP, or RSVP because they are simple, well known communication protocols between many independent nodes in a network (Column 9, lines 53 – 58) in a computer networking environment was well known in the art at the time the invention was made. The Applicant is entitled to traverse any/all official notice taken in this action according to MPEP § 2144.03, namely, "if applicant traverses such an assertion, the examiner should cite a reference in support of his or her position". However, MPEP § 2144.03

further states "See also In re Boon, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice)." Specifically, In re Boon, 169 USPQ 231, 234 states "as we held in Ahlert, an applicant must be given the opportunity to challenge either the correctness of the fact asserted or the notoriety or repute of the reference cited in support of the assertion. We did not mean to imply by this statement that a bald challenge, with nothing more, would be all that was needed". Further note that 37 CFR § 1.671(c)(3) states "Judicial notice means official notice". Thus, a traversal by the Applicant that is merely "a bald challenge, with nothing more" will be given very little weight.

Claim 11 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert in view of Natarajan (6505244).

Regarding claims 11 and 36, Albert teaches the programmable device of claims 7 and 32.

Albert does not explicitily indicate a fault monitor.

Natarajan teaches a policy system in a network node that includes a fault monitor (Column 26, lines 12 – 26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Natarajan's idea for fault monitoring in Albert's system in order to have better feedback for dynamic adjustments to be made incase of bad performance or errors in the system (Column 2, lines 36 – 43).

Claims 3 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert in view of Amara (6674743).

Regarding claim 3 and 28, Albert teaches the programmable device of claims 2 and 27.

Albert does not explicitly indicate that the packet header filter includes packet header filters for each interface port.

Amara teaches that the packet header filter is a first packet header filter (Figure 2, elements 102 and 116), and wherein the programmable access device further comprises a second packet header filter that receives packets directly from the second network interface (Figure 2, elements 104 and 118).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a packet classifier attached to each interface port as taught in Amara's system in Albert's system in order to allow packets to be identified before any forwarding or switching is performed on them (Column 4, lines 55 – 65).

Claims 5-8, 9-10, 12-14, 17-18, 30-31, 33-35, 37-38 and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albert in view of Gai (6167445).

Regarding claim 5 and 30, Albert teaches the programmable access device of claims 1 and 26.

Albert does not explicitly indicate a policer that polices packets by reference to traffic parameters.

Gai teaches a policer that polices packets by reference to traffic parameters (Column 4, lines 55 – 64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Albert's statistical monitoring system to apply Gai's teaching of monitoring network flows based on allowed bandwidth usage in order to ensure fair bandwidth allocation to every flow in the network.

Regarding claims 6 and 31, Albert teaches the programmable access device of claims 5 and 30.

Albert does not explicitly indicate that the policer comprises a marker that marks packets that do not conform with the traffic parameters.

Gai teaches a method of identifying packets which do not conform with the traffic parameters and a way to mark those packets (Column 20, lines 2 – 9; Column 4, line 64 – Column 5, line 8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching on the combination of Albert in order to be able to deal with packets which are labeled in inaccurately and handle them accordingly (Column 4, line 64 – Column 5, line 8).

Regarding claims 8 and 33, Albert teaches the programmable access device of claims 7 and 32.

Albert does not explicity indicate the usage monitor has an associated threshold that when exceeded generates a reporting event for the usage mointor.

Gai teaches issuing thresholds for priority queuing and traffic classes (Column 13, lines 15 – 18) and has a usage monitor that get notified when traffic exceeds profile and makes necessary corrections (Column 4, lines 60 – 67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching of thresholds for traffic types in Albert's system in order to provide a certain quality of service for certain traffic (Column 3, lines 6 – 26).

Regarding claims 9 and 34, Albert teaches the programmable access device of claims 8 and 33, and further comprising a reporting interface that communicates the reporting event to an external processor (Column 6, lines 40 – 52).

Regarding claims 10 and 35, Albert teaches the programmable access device of claims 9 and 34.

Albert does not explicitly indicate that the associated threshold comprises a session activity level threshold.

Gai discloses that the associated threshold comprises a session activity level threshold (Column 13, lines 15 – 36).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching of thresholds for traffic types in Albert's system in order to provide a certain quality of service for certain traffic (Column 3, lines 6 – 26).

Regarding claims 12 and 37, Albert teaches the programmable access device of claims 1 and 26.

Albert does not explicitly indicate one or more output buffers for outgoing packets.

Gai teaches a plurality of output buffers in a programmable network device (Column 2, lines 43 – 46).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching on the combination of Albert's system in order to allow priority queuing and allow packets to have different priorities (Column 2, lines 46 – 57).

Regarding claims 13, Albert teaches the programmable access device of claim 12.

Albert does not explicitly indicate a scheduler associated with the one or more output buffers that schedules the transmission of outgoing packets within the one or more output buffers.

Gai teaches a scheduler associated with the one or more output buffers that schedules the transmission of outgoing packets within the one or more output buffers (Column 10, lines 26 – 27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching on the combination of Albert's system in order to allow priority queuing and allow packets to have different priorities (Column 2, lines 46 – 57).

Regarding claims 14 and 38, Albert teaches the programmable access device of claim 13 and 37.

Albert does not explicitly indicate that the scheduler supports multiple quality of service classes.

Gai teaches the scheduler supports multiple quality of service classes (Column 2, lines 44 – 64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching on the combination of Albert's system in order to allow priority queuing for multiple services and allow packets to have different priorities (Column 2, lines 46 – 57).

Regarding claim 17 and 41, Albert teaches the programmable access device of claims 1 and 26.

Albert does not explicitly indicate that a policer that polices packets by reference to programmed traffic parameters.

Gai teaches a policer that polices packets by reference to programmed traffic parameters (Column 4, lines 55 – 64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Albert's statistical monitoring system to apply Gai's teaching of monitoring network flows based on allowed bandwidth usage in order to ensure fair bandwidth allocation to every flow in the network.

Regarding claims 18 and 42, Albert teaches the programmable access device of claims 1 and 26.

Albert does not explicitly indicate one or more output buffers for outgoing packets and an associated scheduler that transmits the outgoing packets from the one or more output buffers through the second network interface according to a programmed methodology

Albert teaches one or more output buffers for outgoing packets and an associated scheduler that transmits the outgoing packets from the one or more output buffers through the second network interface according to a programmed methodology (Column 2, lines 44 – 64; Column 10, lines 26 – 37).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Gai's teaching on the combination of Albert's system in order to allow priority queuing and allow packets to have different priorities (Column 2, lines 46 – 57).

Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Albert in view of Gai and in further view of Amara.

Regarding claim 50, Albert teaches a device for use in a programmable access device comprising:

a first network interface through which packets are communicated with a first network (Column 9, lines 36 – 48);

a second network interface through which packets are communicated with a second network (Column 9, lines 36 – 48; Figure 3C);

a message interface coupled to an external processor that is configured to implement policy-based services (Column 9, lines 36 – 48);

a packet header filter coupled to the network interfaces and to the message interface (Column 16, lines 53 – 63), wherein the packet header filter identifies messages, received from the first network interface on which policy based services are to be implements (Column 12, line 63 – Column 13, line 9), wherein the packet header filter passes the identified message to the external processor via the message interface (Column 7, line 55 – Column 8, line 12; Column 6, line 48) and passes all other message received from the network interfaces to second network (Figure 3C; Column 12, lines 45 – 56); and

a control interface through which said packet header filter and said forwarding table are programmed (Column 18, lines 23 – 41).

Albert does not explicitly indicate:

a policer configured to discard packets determined as nonconforming to a first traffic parameter (Column 10, lines 61 – 63);

a marker configured to discard packets determined as nonconforming to a second traffic parameter (Column 10, lines 61 – 63; Column 13, lines 10 – 20).

or the packet header filter includes packet header filters for each interface port.

Amara teaches that the packet header filter is a first packet header filter (Figure 2, elements 102 and 116), and wherein the programmable access device further comprises a second packet header filter that receives packets directly from the second network interface (Figure 2, elements 104 and 118).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a packet classifier attached to each interface port as taught

in Amara's system in Albert's system in order to allow packets to be identified before any forwarding or switching is performed on them (Column 4, lines 55 – 65).

Gai teaches a policer that polices packets by reference to traffic parameters (Column 4, lines 55 – 64) and identifying packets which do not conform with the traffic parameters and a way to mark those packets (Column 20, lines 2 – 9; Column 4, line 64 – Column 5, line 8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Albert's statistical monitoring system to apply Gai's teaching of monitoring network flows based on allowed bandwidth usage in order to ensure fair bandwidth allocation to every flow in the network.

(10) Response to Argument

With regards to claims 1 and 26, the appellants argue that Alberts does not teach a second network interface because there is no network between the forwarding agent (231), the service mangers (241 and 242), or the servers (220). See pg 9 of appellant's brief.

In response the examiner respectively submits:

Alberts does teach a second network interface because there is a network between the agents, mangers, and servers. Figure 2A of Albert is the best example of the described system the examiner is relying upon.

Packets travel into the system from the clients (201-203) through a first network (210) to the forwarding agent (231). *See* Col. 6, lines 24-27. From the forwarding

agent, some of the packets can get forwarded to the service managers (241-242). *See* Col. 6, lines 44-53. The remaining packets get forwarded onto the plurality of servers (220-223). *See* Col. 6, lines 44 – 48. The appellant does not believe that there exists a network located between the forwarding agent (231) and the servers (220), and relies in part on the idea that since network (210) is labeled as a network, if a network had existed between the forwarding agent and servers, there would have been another network element shown in the figure.

Network "clouds" are used in network disclosure for abstraction purposes. Network 210 is actually a series of routers, switches, ISPs, DNS servers, DCHP servers, plus many more network elements that make up almost every LAN or WAN network. The cloud is used to clarify that those elements are well known and not necessary to describe Albert's invention. There is no network or network cloud between the forwarding agents and the servers because the disclosure shows how these elements are actually connected. Since the art is disclosing the system and connections, there is no need to describe it as a network cloud because there is no need for abstraction.

In Col. 6, lines 30 – 35, Albert teaches that server that "server 222 may communicate with network 210 through either of the forwarding agents, server 221 communicates with network 210 exclusively through forwarding agent 231, and server 223 communicates with network 210 exclusively through forwarding agent 232." This shows that the connection between the servers and the forwarding agents is not part of network 210, but a separate entity where the communication must go through the

agents, and messages cannot travel around the agents into the servers. This teaching further shows that the servers must **communicate with** the agents. The servers are not part of the agents, they exist as separate nodes in the networked system, they must send communications from the server entity to the agent entity through a connection, which is shown as a line in Figure 2A.

As result, because there is a network connection between the servers and forwarding agents, there must also be an interface within the agent to that network, thus a second network interface.

With regards to claims 1 and 26, the appellants argue that Alberts does not teach that the service manager actually "'programs' the forwarding agent and a packet header filter." See pg 10 of Appellant's brief.

In response the examiner respectively submits:

In determining the meaning of programming the forwarding agent and packet header filter, the examiner notes that there is no express definition of what "programs" or programmed means in the specification. So in light of the specification, the examiner gave the idea of the service manager programming the packet header filter ordinary meaning in the art. In this context ordinary meaning of programming basically comprises any form of altering the way the forwarding agent and the packet header filter operates. Alberts teaches that the packet header filter in the forwarding agent operates by using wildcard affinities to identify and filter packets to the proper destination. *See* Col. 16, line 53 – Col 17, line 15. Alberts goes on to indicate that the wildcard affinities

are updated by receiving messages from the service manager. *See* Col. 18, lines 23-65. Alberts teaches the service manager updating the wildcard affinities which alters the operation of the packet filter of the forwarding agent, thus programming the header packet filter in the forwarding agent.

With regards to claims 1 and 26, the appellants argue that the rejection applied by the examiner cites the same element for both the control interface and the external processor. See pg 11 of the appellants brief.

In response the examiner respectively submits:

Using figure 2A of Albert is the best example of the described system, the examiner actually maps the service manager (241 or 242) as the external processor of the claimed invention. The control interface an interface of the forwarding agent (231 or 232) which interfaces and receives messages from the service manager. This interpretation meets the claimed invention, because the forwarding agent, as mapped to the programmable access device, receives updates from the external processor through said control interface, thus in Alberts the messages received by the forwarding agent from the service manager. *See* Col. 18, lines 23-65.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Kevin Bates/

Primary Examiner, Art Unit 2456

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